



Minnesota Department of
Transportation

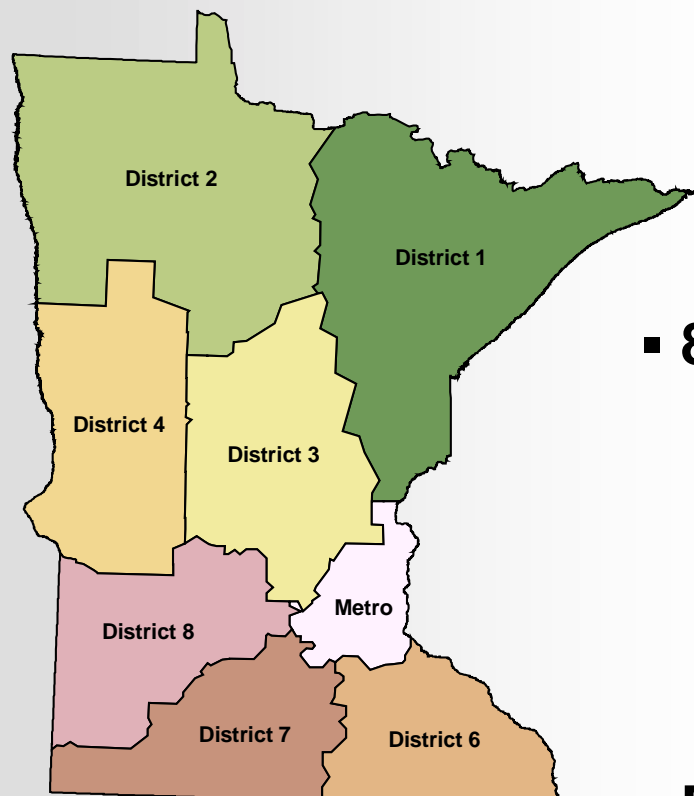
***Statewide Transportation
Planning:
A Performance Based Approach***



Overview

- **Mn/DOT Organization, System Facts**
- **Planning and Programming Process**
- **Statewide Transportation Plan 2003**
 - Plan Development Process
 - Performance Based Policy Approach
- **District Plans 2005**
- **Modal, Operations Plans and Implementation**

Decentralized Organization



- **8 Districts**
 - Twin Cities Metro
 - 7 Greater MN
- **8 Area Transportation Partnerships**
 - MPO, RDC
 - Cities, Counties
 - Tribes
- **Funding distribution formula**



State Transportation Systems

- Highways
- Water and Rail Freight
- Transit
- Aviation
- Bicycle and Pedestrian Ways



System Profile

- 132,000 miles of streets and highways
- 12,000 miles of state trunk highways
- 20,398 bridges statewide
- 65 Greater MN counties with public transit
- 5 public ports
- 222 miles of navigable rivers
- 4,521 miles of railroad tracks
- 136 public airports



Minnesota Roadways

Minnesota Roadways Mile Share & Vehicle Miles of Travel Share in 2000

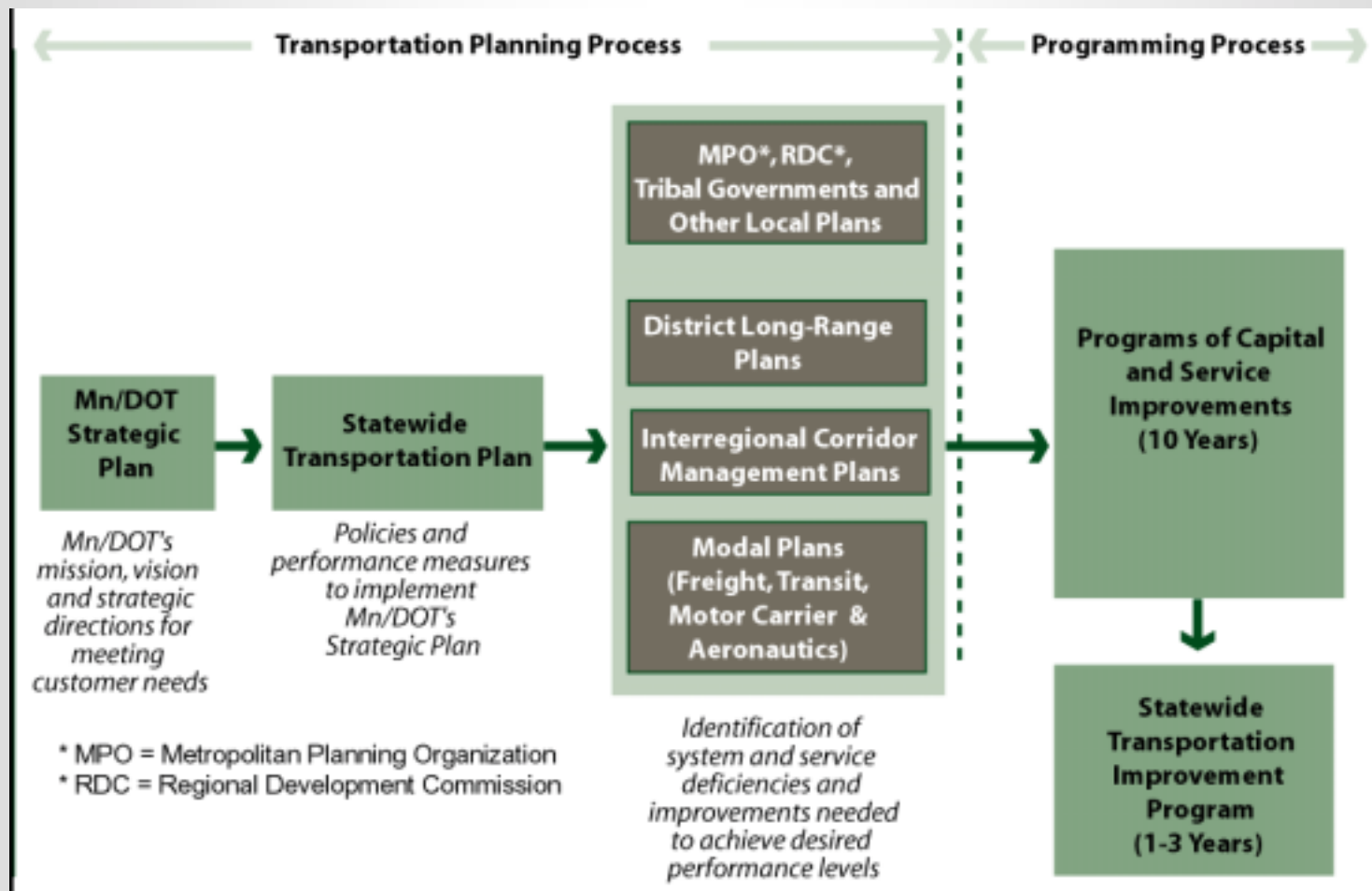
	Percent Share of Miles	Percent Share of Daily VMT
State Trunk Highways	9%	61%
County State-Aid Highways	23%	22%
Municipal State-Aid Streets	2%	8%
County Roads	11%	2%
Township Roads	40%	2%
City Streets	12%	5%
Other Highways	2%	0%*
Total (approximately 132,000 miles)	100%	100%

Source: Mn/DOT Office of Investment Management

**Calculated as 0% due to rounding*



Mn/DOT's Planning and Programming Process





Purpose of 2003 Update



- **State and Federal Planning Requirements**
- **Department Goals**
 - Stronger link to Strategic Plan
 - Multimodal
 - Performance Based



Internal Plan Development Process

Quality and Best Practice

- **Core Work Team-
Mn/DOT & consultants**
- **Technical Committee**
 - functional area experts
 - work teams

Understanding and Buy-in

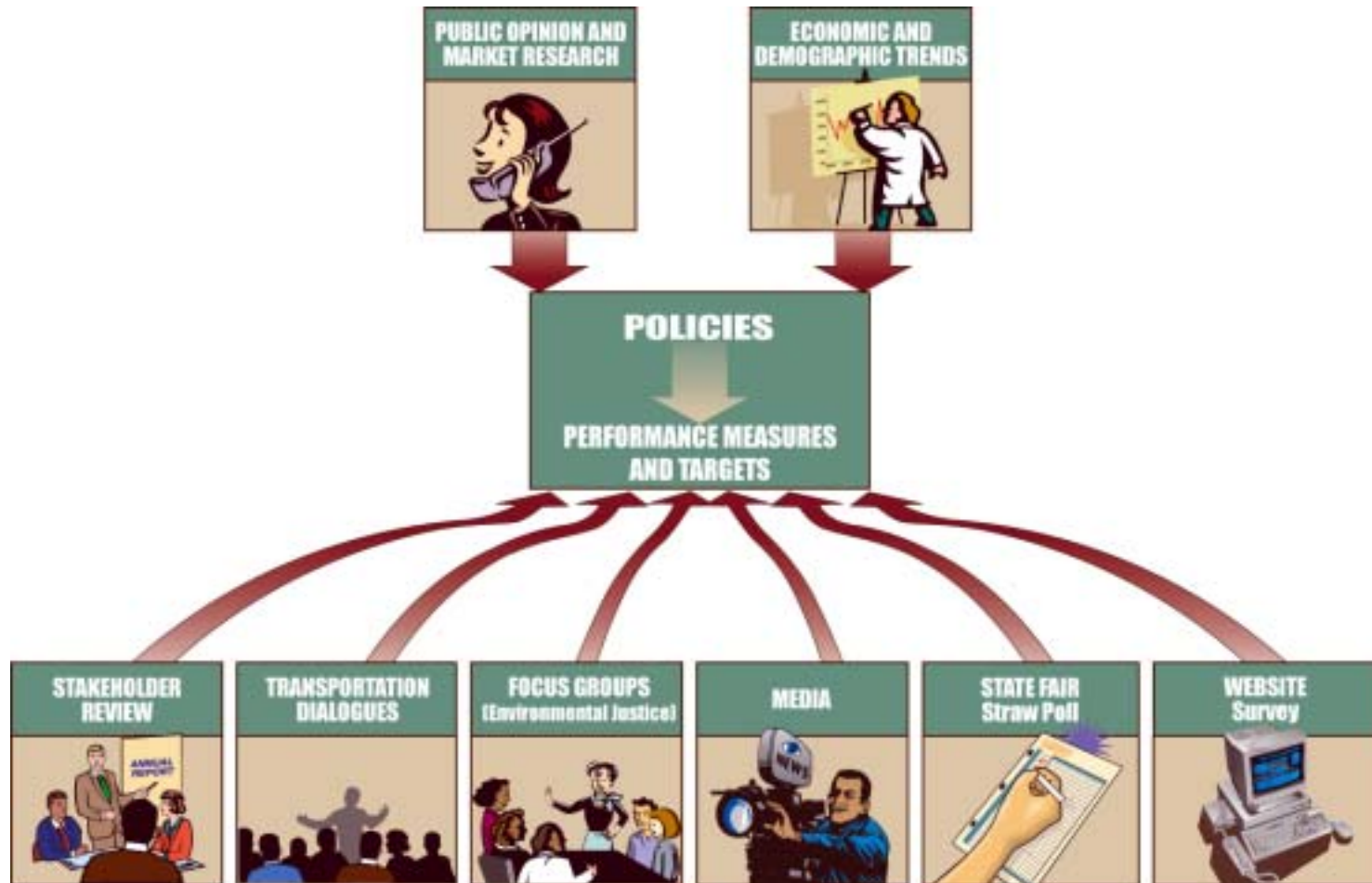
- **Updates via routine venues**
- **State Plan Roundtable-
selected Office Directors**
- **Statewide Planning Steering
Committee- DOT, State
Agencies, MPO's, RDC's,
Cities, Counties**
- **Commissioner / Lt. Governor**



Public Outreach Goals

- Educate residents on planning process, seek input
- Connect with growing minority groups to increase understanding of their transportation and involvement needs
- Gain information to address customer/stakeholder needs and priorities

Public Outreach





Stakeholder Review

- **On-going, using established planning process for briefings, feedback**
- **Generally knowledgeable, vested interests**
 - MPO
 - RDCs
 - Area Transportation Partnerships
 - Cities, Counties and Statewide Associations- engineers, elected officials
 - Advocacy Groups
 - Professional Organizations

Transportation Dialogues

- **8 locations**

- **450 participants**



- **Overview of planning process & policies**

- **Ranking of policies**

- Preserve before expand
- Protect investment

- **Greater Minnesota**

- Preservation
- Mobility (goods movement)
- Safety (design, behavior)

- **Twin Cities**

- Mobility (people)
- Preservations
- Travel Options

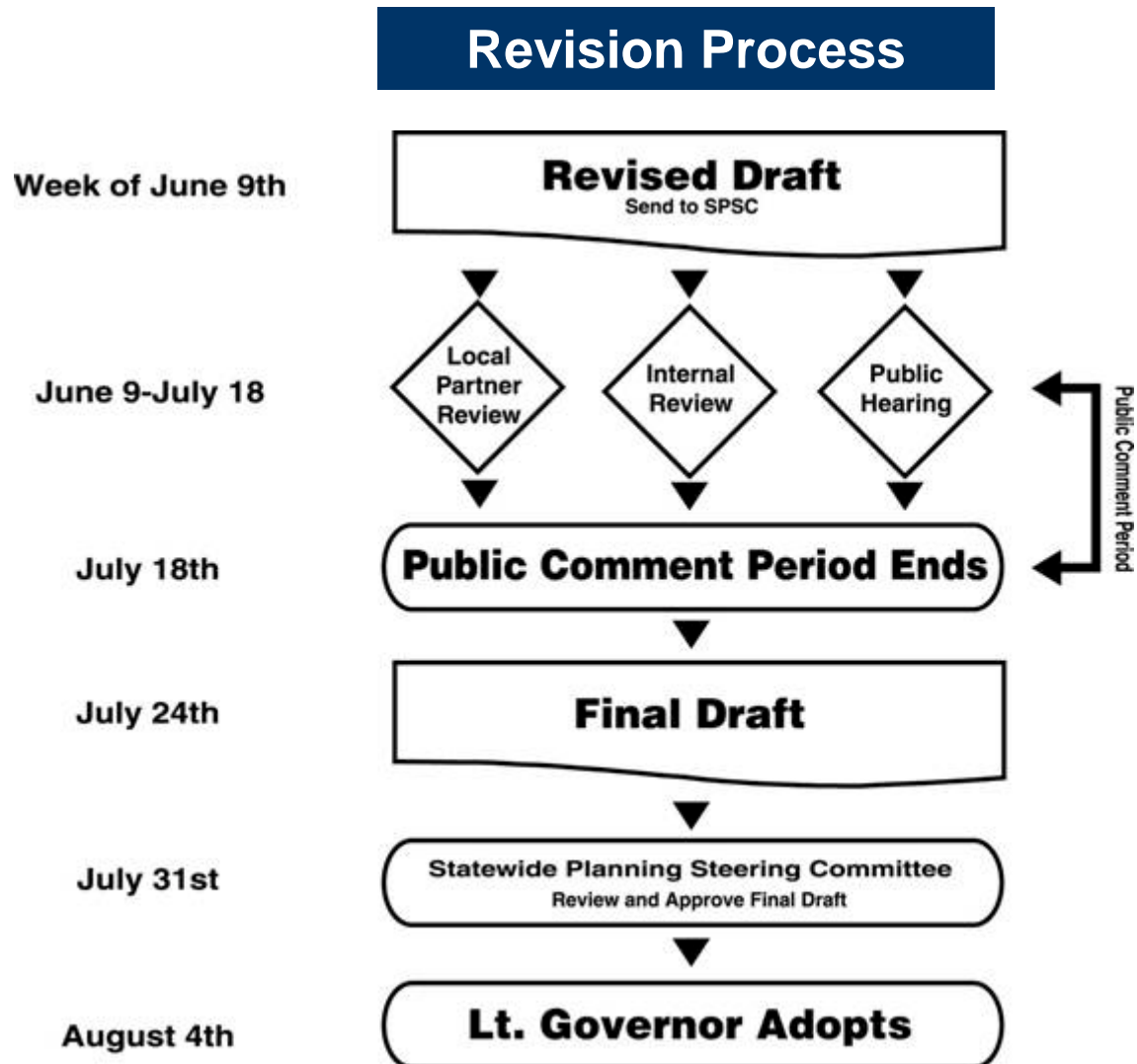


Focus Groups

- **Environmental Justice Groups**
 - African American, Asian American, Hispanic, Hmong, Somali
 - Twin Cities, Rochester, Willmar, St. James
- **General Citizen Groups**
- **Preservation, safety, public involved & educated, congestion areas targeted first, environment respected**
- **Policies all interconnected**



Statewide Transportation Plan



Mn/DOT's Strategic Directions



- 1. Safeguard what exists**
- 2. Make the network operate better**
- 3. Make Mn/DOT work better**



Policy Framework

- **Policies must be aligned with Strategic Directions**
- **Policies must consider:**
 - System infrastructure and services
 - System management and operations
 - System preservation and expansion
 - Movement of people and freight
 - Range of competitive travel choices
 - Urban and rural areas



Policy Framework (Cont.)

- **Must address major transportation themes:**
 - Safety
 - Security
 - Mobility
 - Accessibility
 - Environmental protection
 - Community values



Statewide Transportation Plan Policy Framework

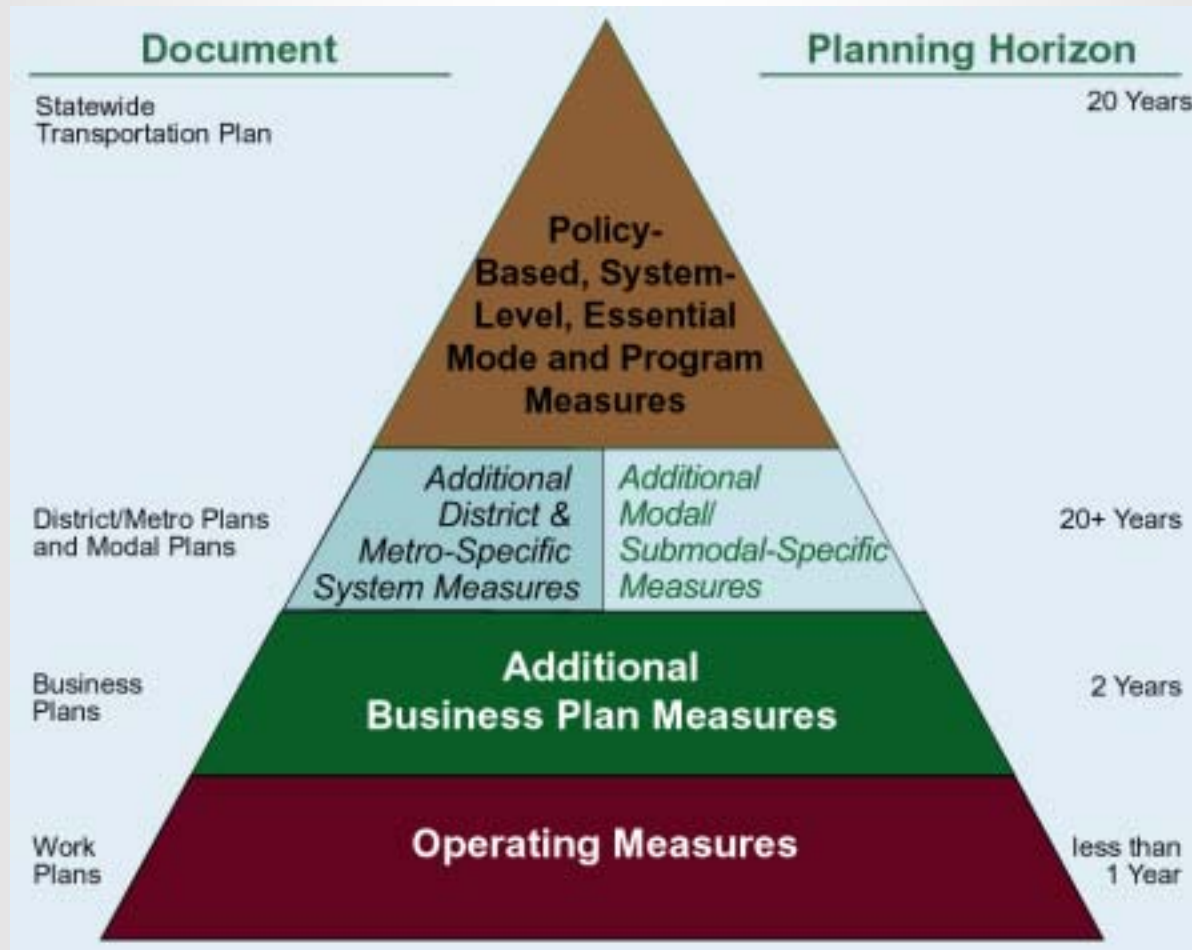
Strategic Direction	Safeguard What Exists	Make the Transportation Network Operate Better	Make Mn/DOT Work Better
Plan Policies	<ol style="list-style-type: none"> 1 Preserve Essential Elements of Existing Transportation Systems. (DP) 2 Support Land Use Decisions that Preserve Mobility and Enhance the Safety of Transportation Systems. 3 Effectively Manage the Operation of Existing Transportation Systems to Provide Maximum Service to Customers. (HSOP) 	<ol style="list-style-type: none"> 4 Provide Cost-effective Transportation Options for People and Freight. (DP) 5 Enhance Mobility in Interregional Transportation Corridors Linking Regional Trade Centers. (DP) 6 Enhance Mobility Within Major Regional Trade Centers. (DP) 7 Ensure the Safety and Security of the Transportation Systems and Their Users. (DP / CHSP) 	<ol style="list-style-type: none"> 8 Continually Improve Mn/DOT's Internal Management and Program Delivery. 9 Inform, Involve and Educate All Potentially Affected Stakeholders in Transportation Plans and Investment Decision Processes. 10 Protect the Environment and Respect Community Values.



Statewide Plan Policy Direction

- **Supporting each Policy:**
 - ✓ Outcomes Expected
 - ✓ Performance Measures
 - ✓ Performance Targets
 - ✓ Guidance for Use of Policy
 - ✓ Example Strategies for Policy Implementation

Performance Measures Pyramid





Performance Measures Criteria

- Statewide significance: measure a systemwide attribute or essential element of mode or department function.
- Meaningfully measure a key outcome of the Statewide Plan Policy Framework.
- Represent together, all major functions, modes and customer segments for which Mn/DOT delivers a transportation service.
- Cover outcomes over which Mn/DOT has direct or indirect influence.
- Measure an attribute that is important to customers and stakeholders.

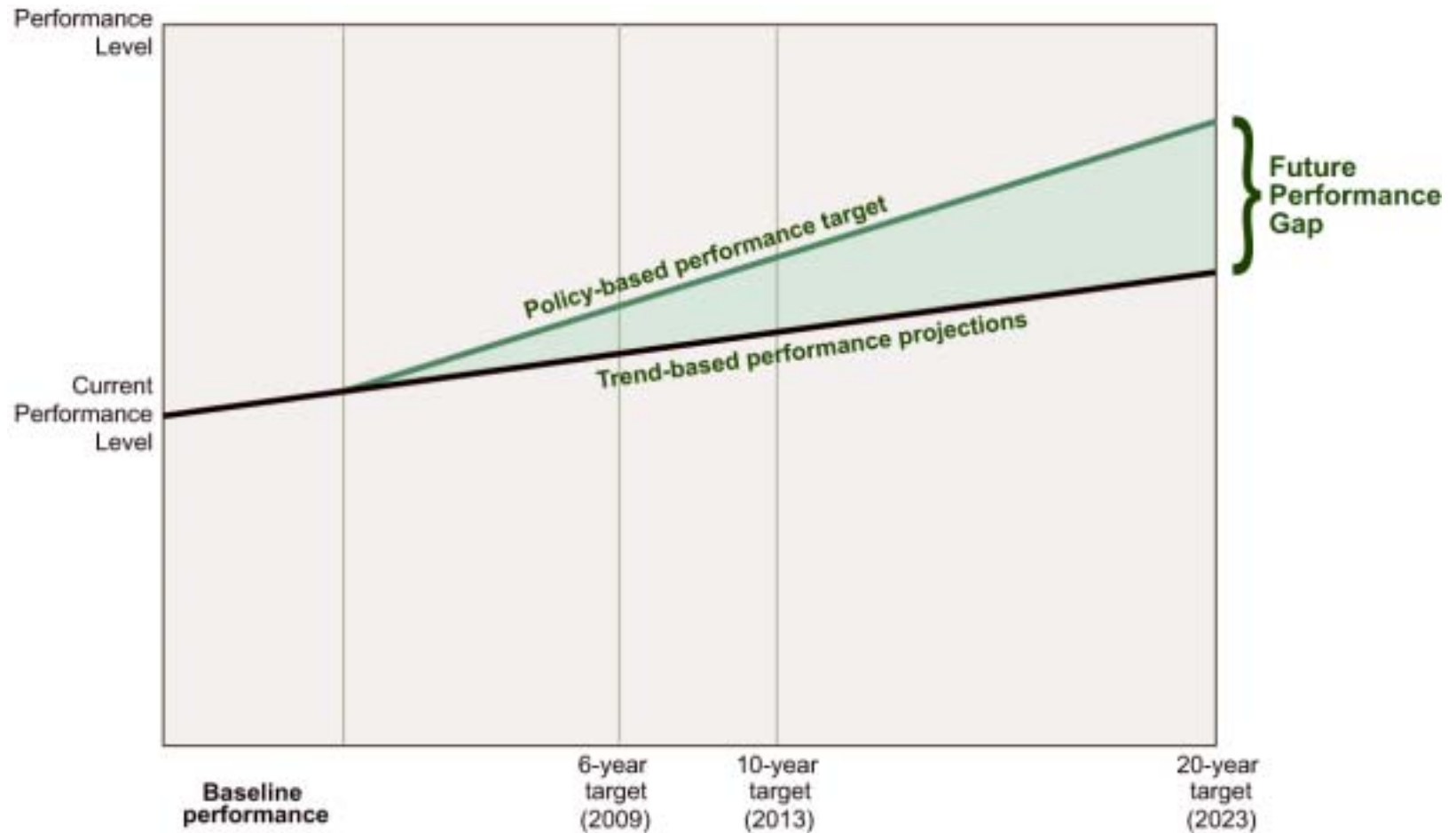


Target-Setting Framework

- Targets are based on policy or customer expectations
- Related to trend-based projections of forecasts
- Targets should be realistic: unconstrained but attainable

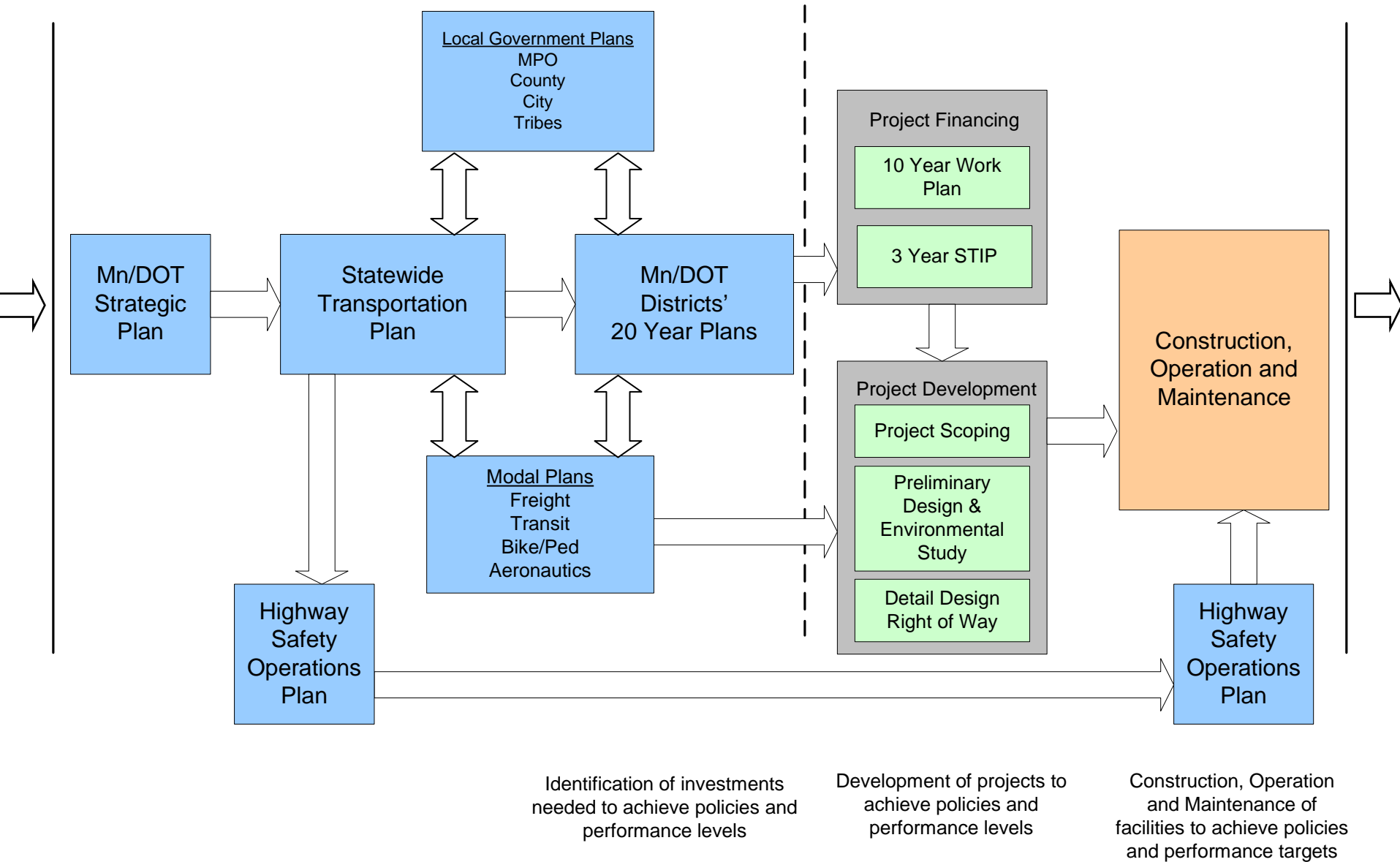


Performance Target Levels

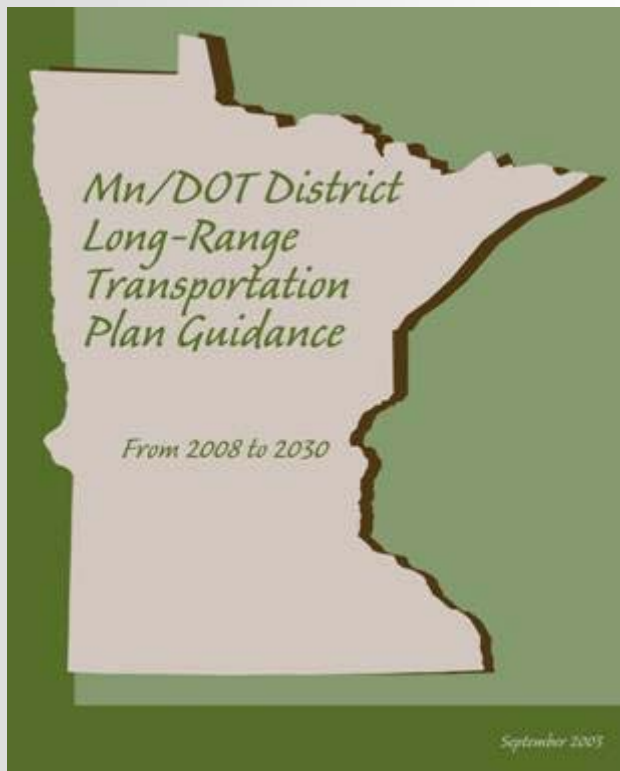




Mn/DOT's Planning and Programming Process



District Plan Purpose



1. Objective, consistent statewide estimate of investments to meet performance targets
2. Prioritize investments for available funding
3. Identify gaps- performance categories where additional funding could be applied (range of options)

(For Use at Legislature)



District Plan Scope

5 Performance Policies

- System Preservation
- Highway Investments for Transit and Freight
- Interregional Mobility
- Trade Center Mobility
- Safety (stand alone)

3 Planning Periods

- 2008-14
- 2015-23
- 2024-30

2 Investment Scenarios

- Investments to Meet Performance Targets
- Investment Priorities for Forecasted Available Funding



District Plan Process 2003-05

- District Plan Guidance, revenue forecasts
- Monthly video conferences with planners
- 3 Check-In Meetings- Senior Management
- CO “expert” offices provided performance data, trends, investment levels for pavement, bridge
- Districts analyzed system for safety, mobility deficiencies; identified strategies, costs
- Districts handled stakeholder involvement



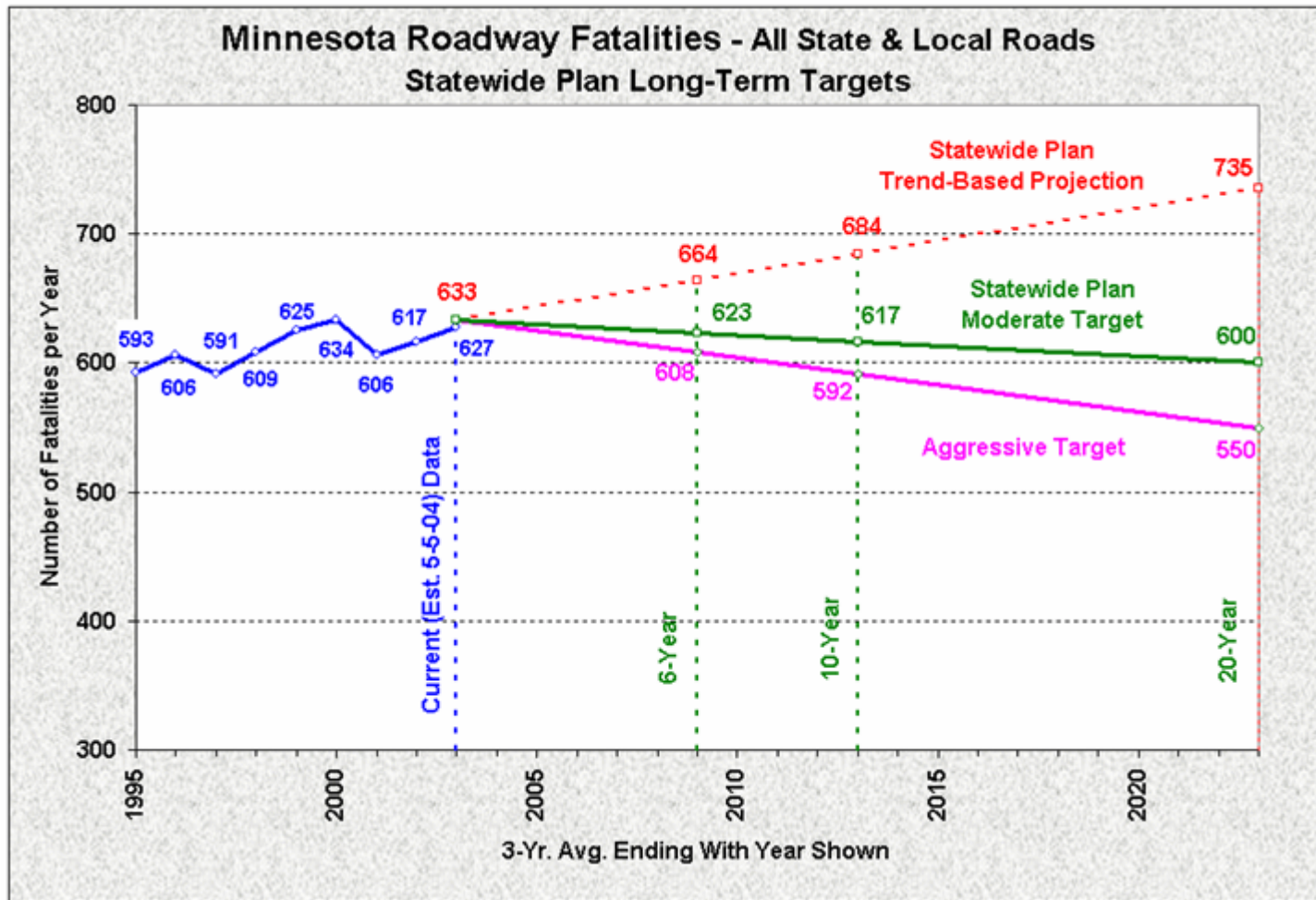
Shifting from Policies to Investments

- Consistency is a challenge
- Performance based planning suddenly became “real”
- Not all performance targets related directly to investments (safety)
- Missing some key concerns- community needs
- Some major projects on deck not “warranted” by performance
- System performance based investment vs geographic equity



Policy 7

Increase Safety and Security of the Transportation System and Users





Safety Targets: Reduce Fatalities and Crash Rates

- **Performance outcome affected by more than highway design: behavior, weather, etc.**
- **All investments address safety**
 - Pavement, bridge preservation
 - Mobility, congestion mitigation
- **Comprehensive, multi-jurisdictional approach required (CHSP)**
 - Education, enforcement, engineering, emergency services
- **Stand alone highway investments focus on high crash locations, conditions**



Safety Strategies

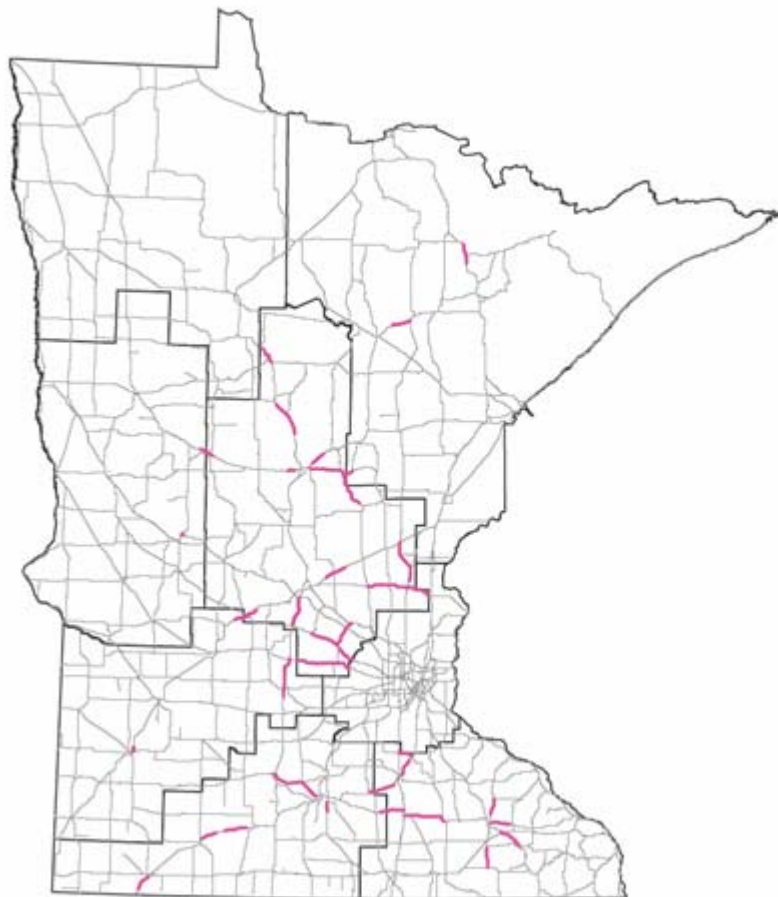
- **Corrective Investments- IRC & Other Highways**
 - Existing high crash intersections and segments- where cost effective design modifications may mitigate rate and severity (Fatals and Type A injuries)
- **Preventive Investments- IRC & Other**
 - **Rural Roads:** run-off the road, head-on collisions
 - 2-4 lane rural expansion: > 11,200 ADT
 - Minimum shoulders with rumble strips, turn lanes: > 5,000 ADT
 - Narrow median- cable barrier: > 40,000 ADT
 - Design gaps
 - **Urban Intersections**
 - Turn lanes on all legs of major intersections: highway > 6,500 ADT
 - **Rail Crossings**
 - Gates and flashers at high hazard locations, IRC's



Greater MN Safety Strategies

**Investments to Meet
Performance Targets
2008 to 2030**

 **2 to 4 Lane**

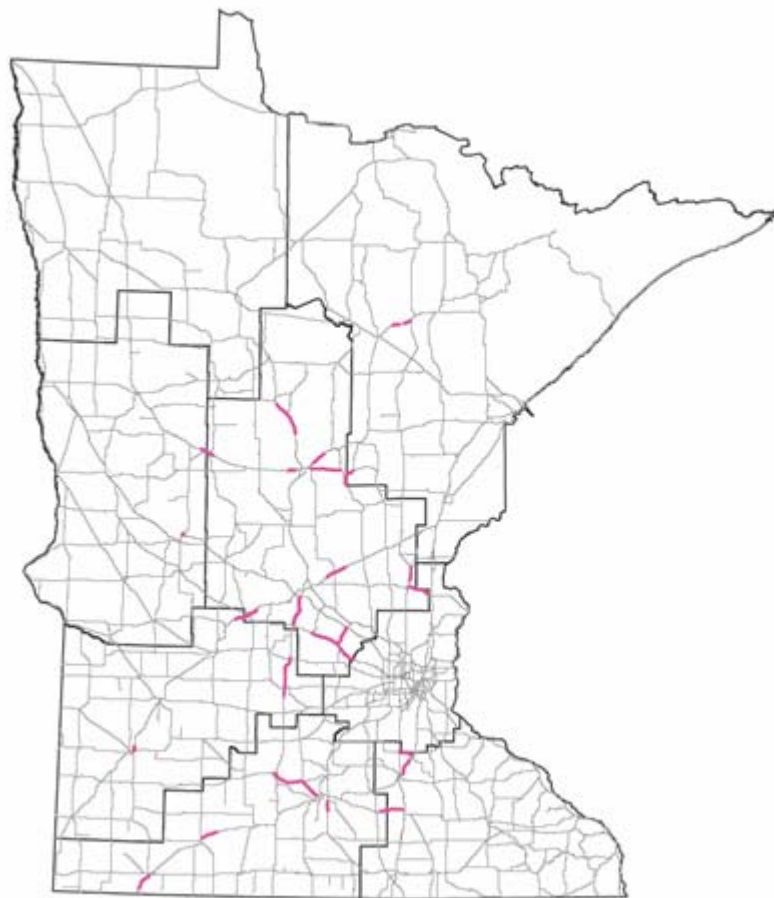




Greater MN Safety Strategies

**Priorities for
Available Funding
2008 to 2030**

 **2 to 4 Lane**





Policy 5: Enhance Mobility Between Trade Centers

Corridor System Speed Targets

High Priority IRC	60 mph
Medium Priority IRC	55 mph
Regional Corridors	50 mph

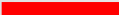
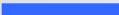
Safety related investments
included in Policy 7





Greater MN IRC Investments

**Investments to Meet
Performance Targets
2008 to 2030**

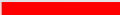
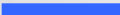
-  **Speed Performance**
(Policy 5)
-  **Safety Investments**
(Policy 7)





Greater MN IRC Investments

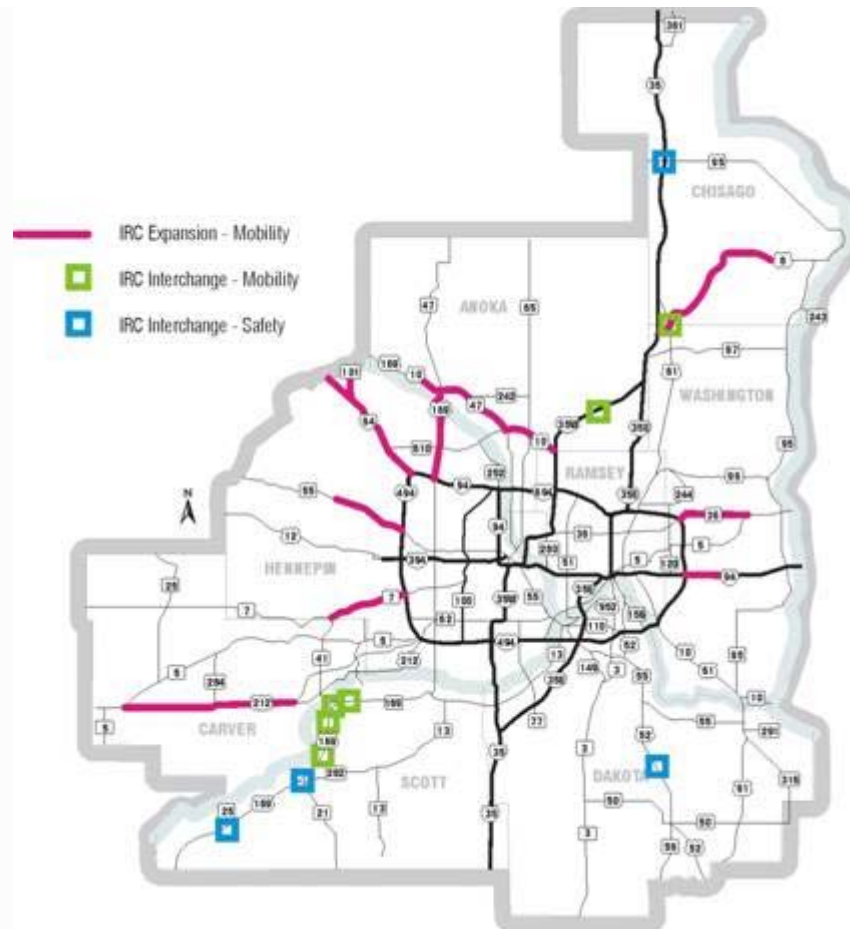
**Priorities for
Forecasted Available
Funding
2008 to 2030**

-  **Speed Performance**
(Policy 5)
-  **Safety Investments**
(Policy 7)



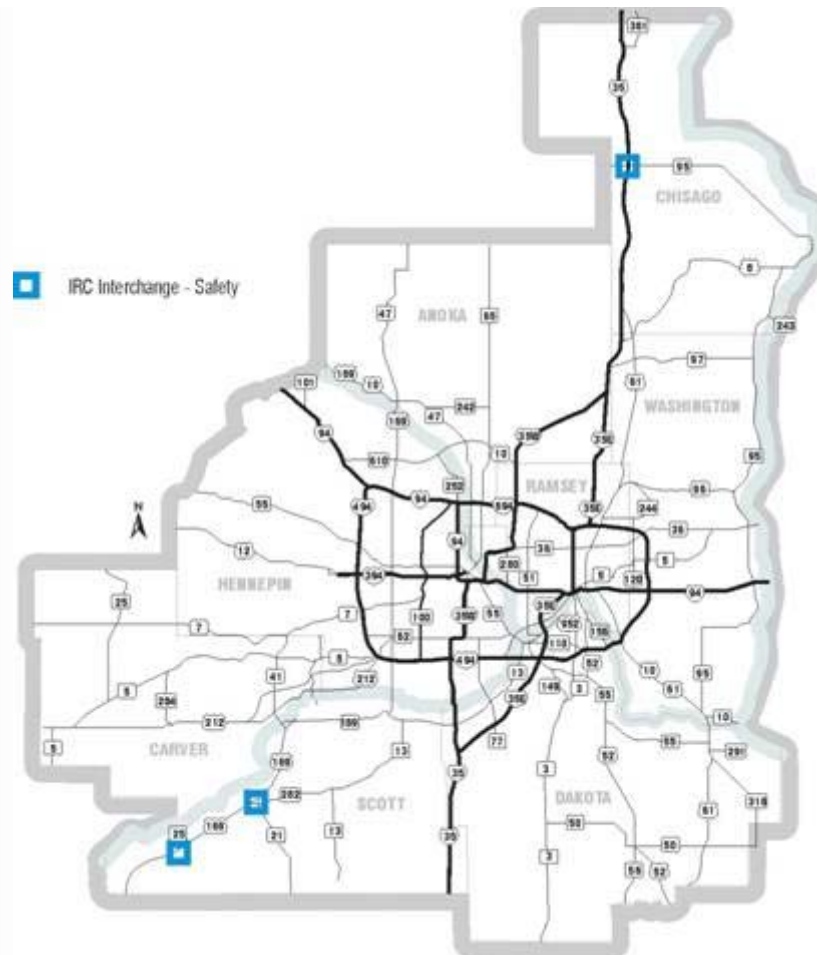
Metro IRC Investments

**Investments to Meet
Performance Target
Interregional Corridor
Mobility/Safety
2008 to 2030**



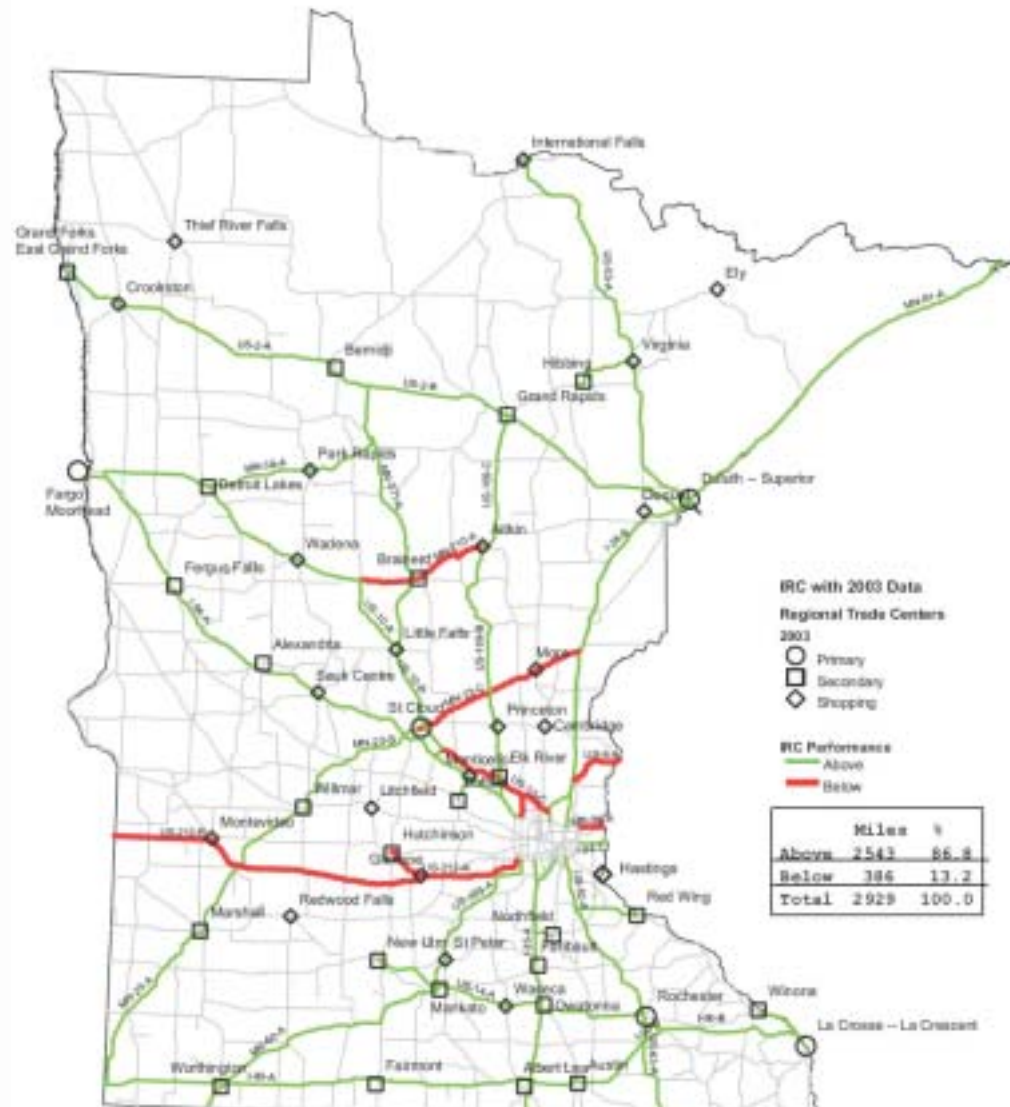
Metro IRC Investments

**Priorities for
Forecasted Available
Funding
Interregional Corridor
Mobility/Safety
2008 to 2030**





2003 IRC System Speed Performance





2014 IRC System Speed Performance

Year 2014 IRC System Speed Performance

Includes all improvements from BAPs, STIP, Major Construction 2004 and District Plans

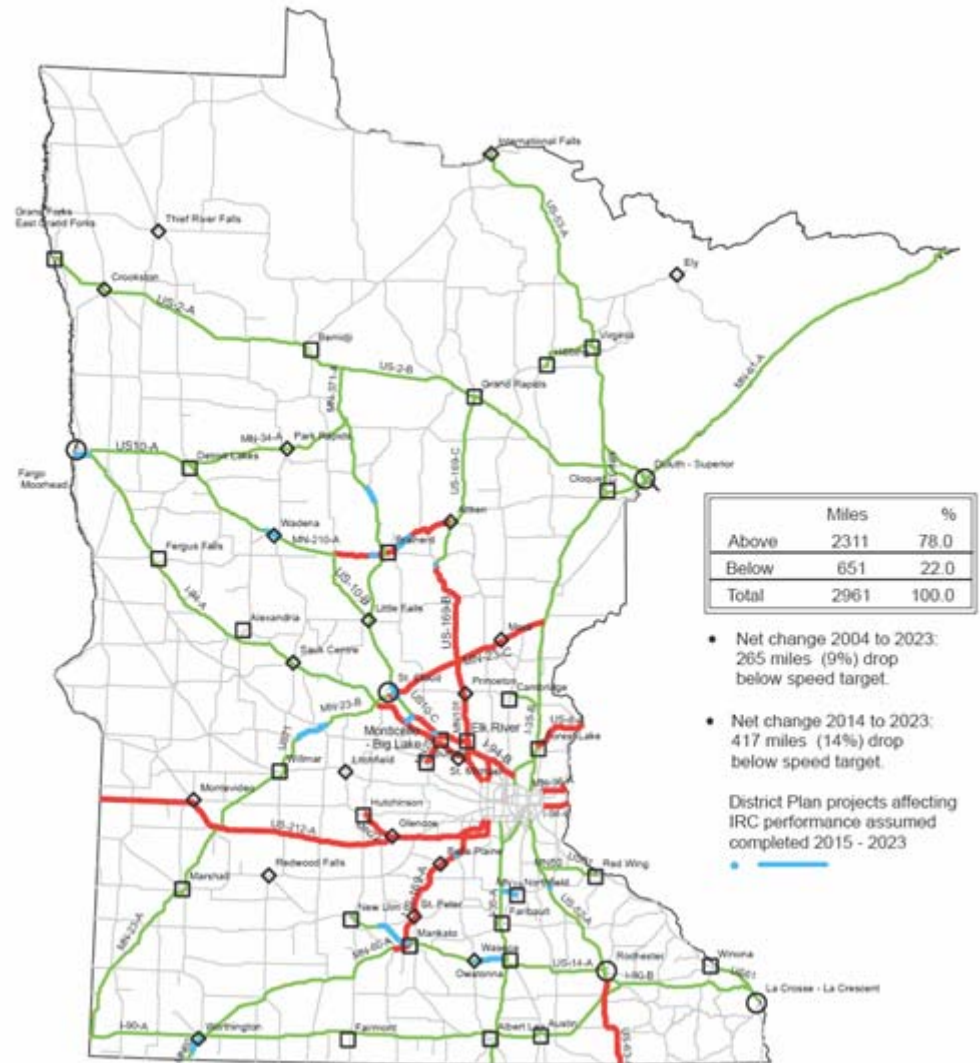




2023 IRC System Speed Performance

Year 2023 IRC System Speed Performance

Includes all improvements from BAPs, STIP, Major Construction 2004 and District Plans

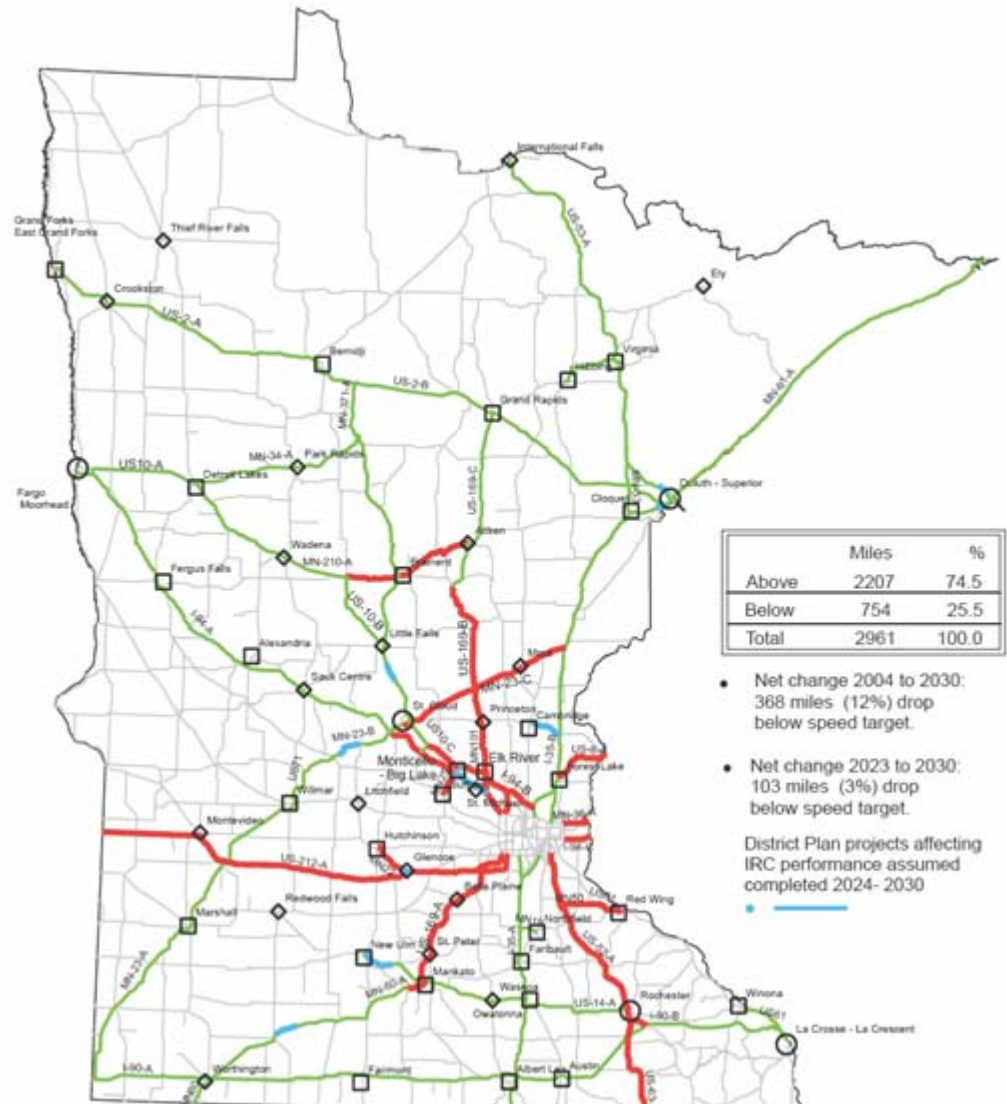




2030 IRC System Speed Performance

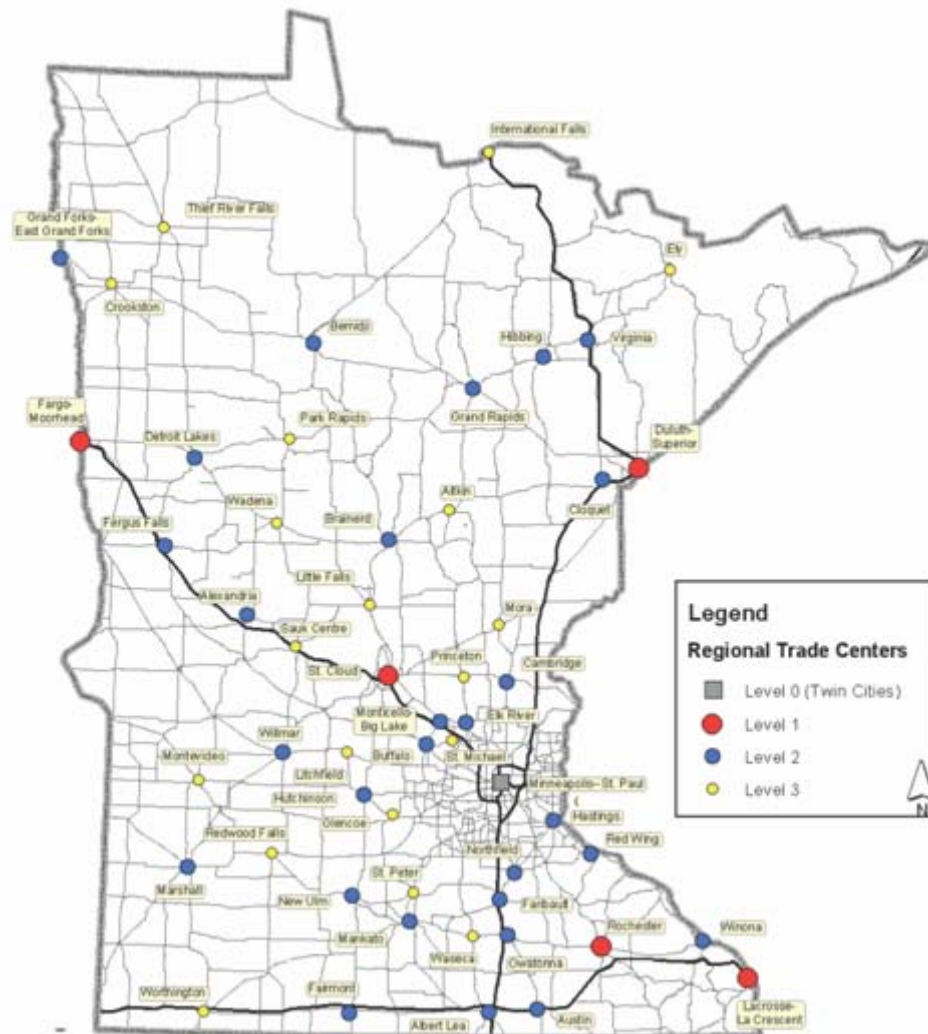
Year 2030 IRC System Speed Performance

Includes all improvements from BAPs, STIP, Major Construction 2004 and District Plans



Policy 6: Trade Center Mobility

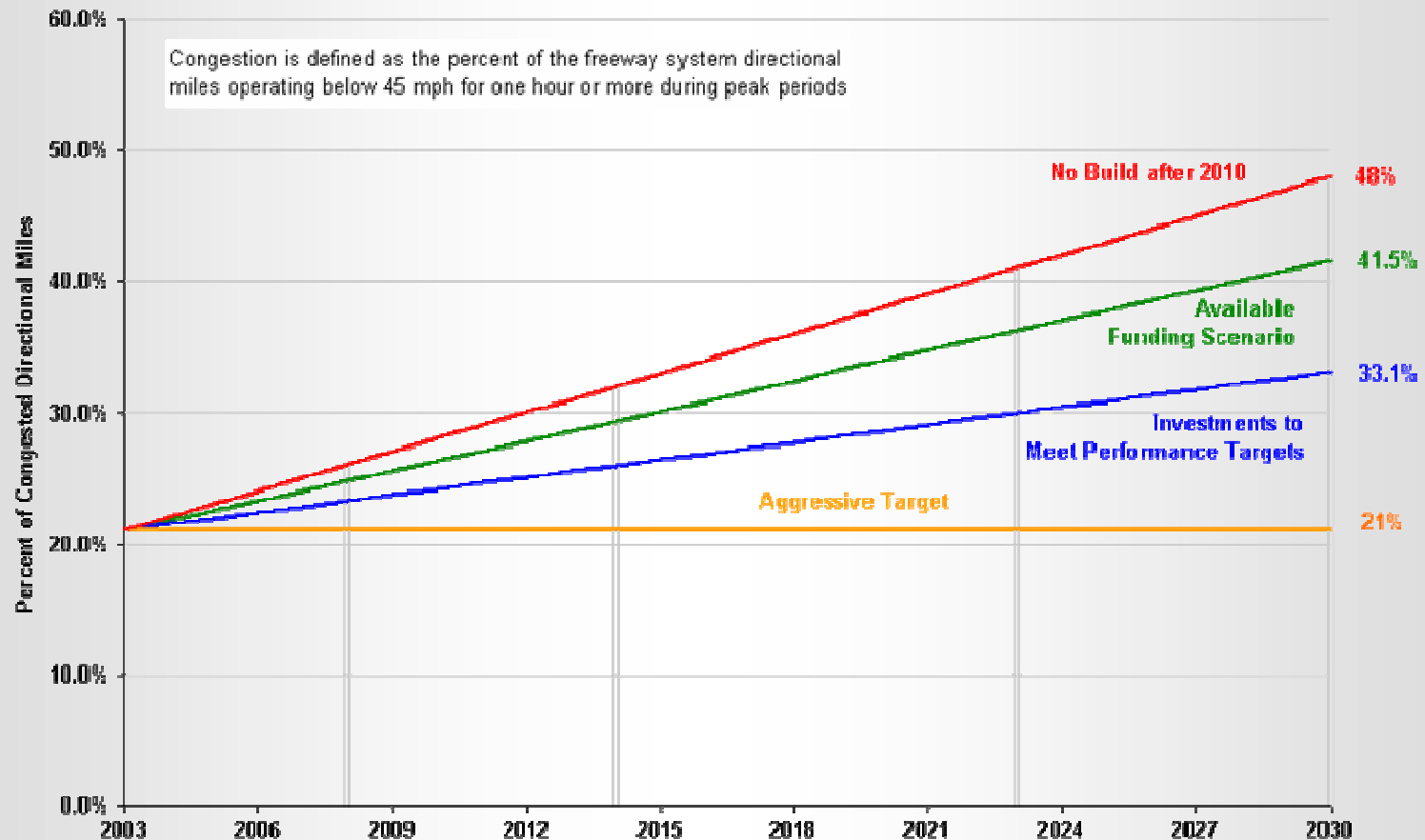
Policy 6: Enhance Mobility within Metro and Regional Trade Centers





Metro Freeway Congestion Target

no more than 1/3 system congested





Metro Freeway Investments

**Investments to Meet
Performance Targets
2008 to 2030**

 **Freeway
Expansion**

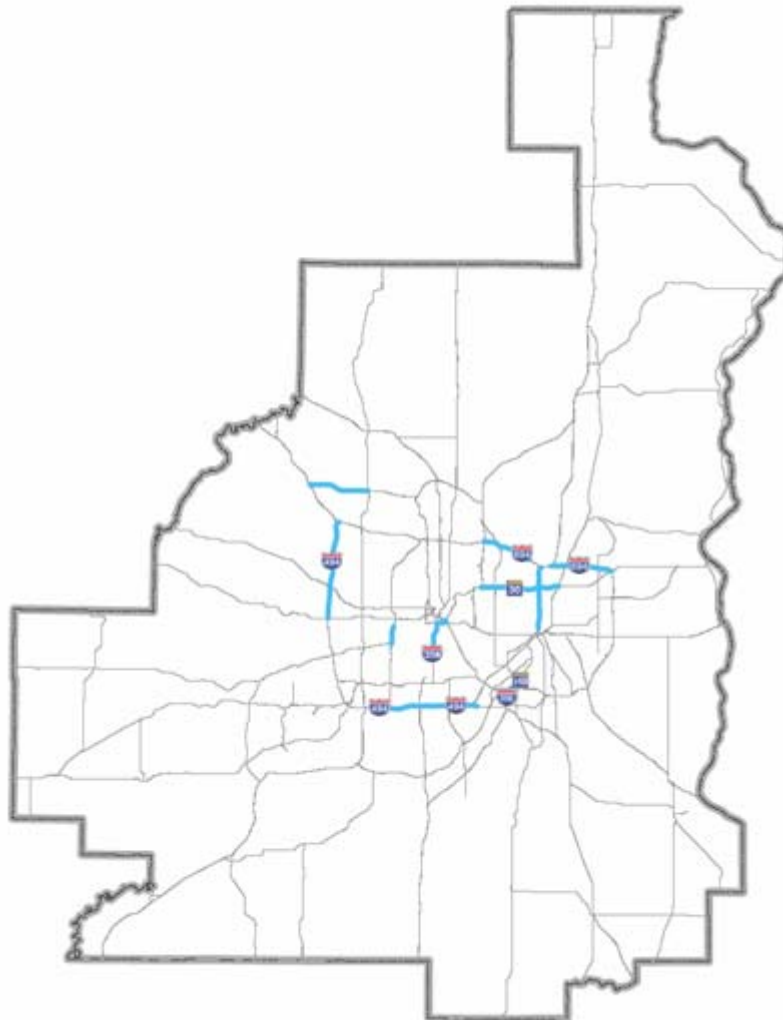




Metro Freeway Investments

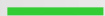
**Priorities for
Forecasted Available
Funding
2008 to 2030**

 **Freeway
Expansion**



Metro Arterial Investments

**Investments to Meet
Performance Targets
2008 to 2030**

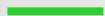
 **Arterial
Expansion**





Metro Arterial Investments

**Priorities for
Forecasted Available
Funding
2008 to 2030**

 **Arterial
Expansion**





Greater MN Trade Centers Congestion Indicators

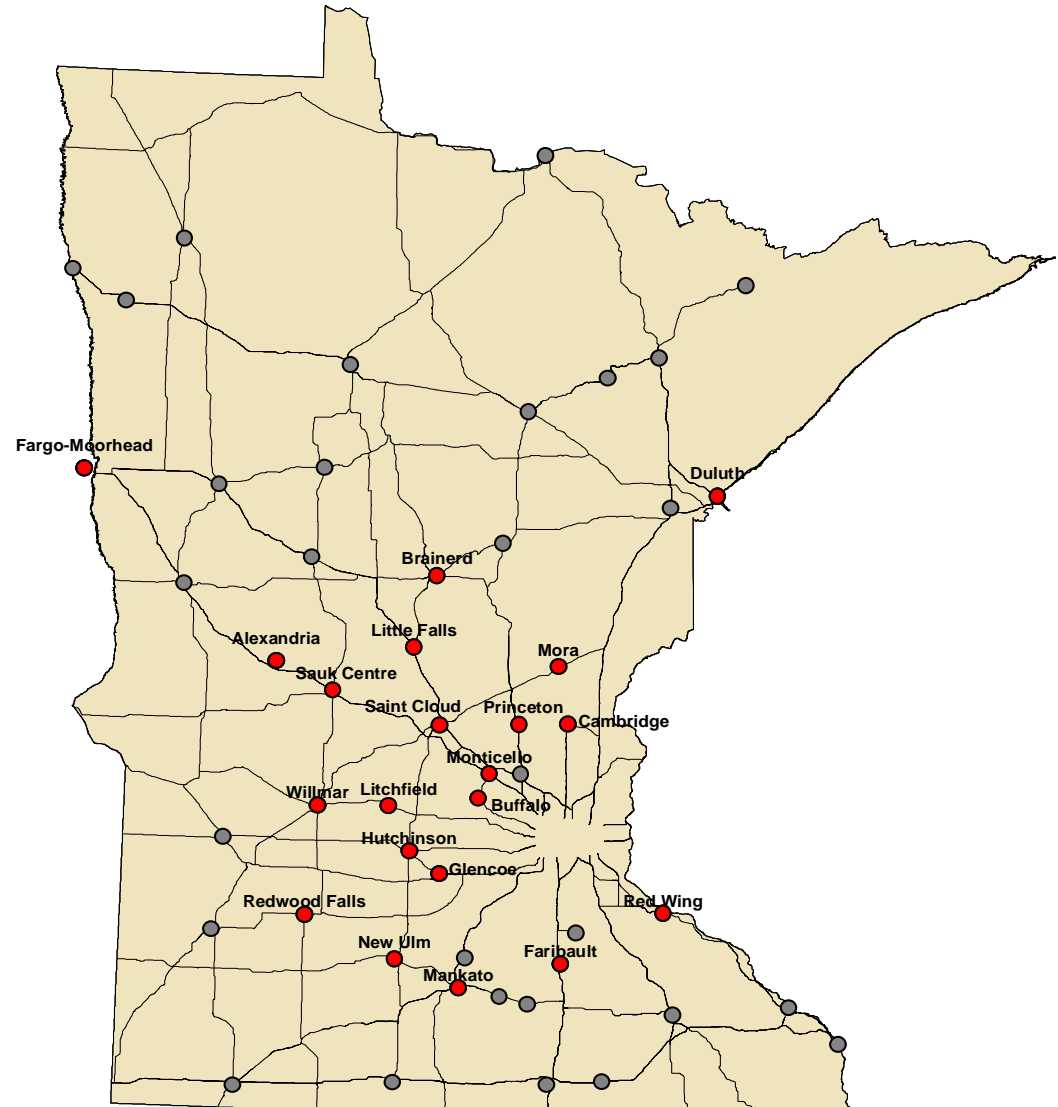
Based on Forecasted Average Annual Daily Traffic

• 4-lane Freeway	75,000
• 6-lane Freeway	115,000
• 2-lane Arterial	15,000
• 4 lane Arterial	30,000

- Area Traffic Study needed
- Multi-jurisdictional approach



Congestion & Mobility

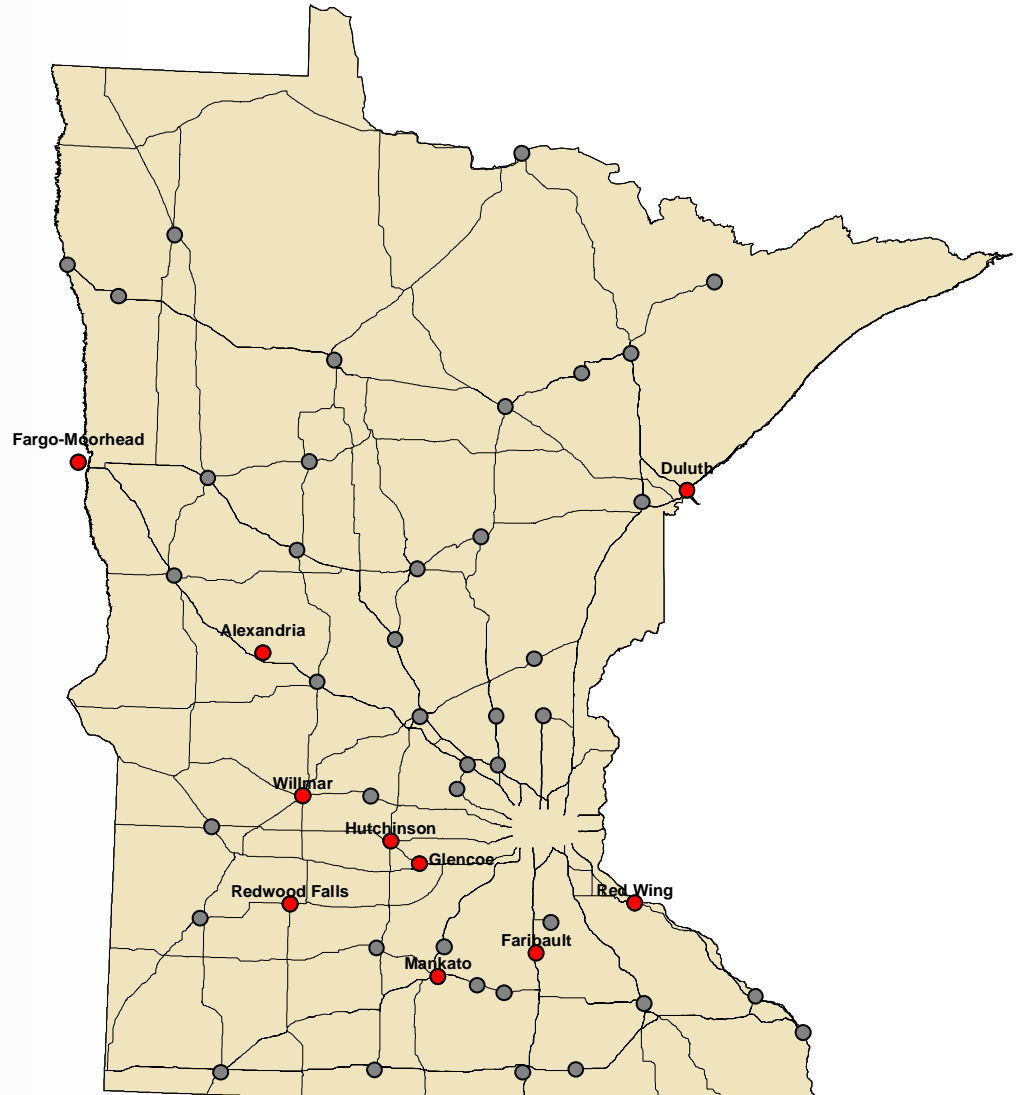




Greater MN Trade Center Investments

**Priorities for
Forecasted Available
Funding
2008 to 2030**

Congestion & Mobility





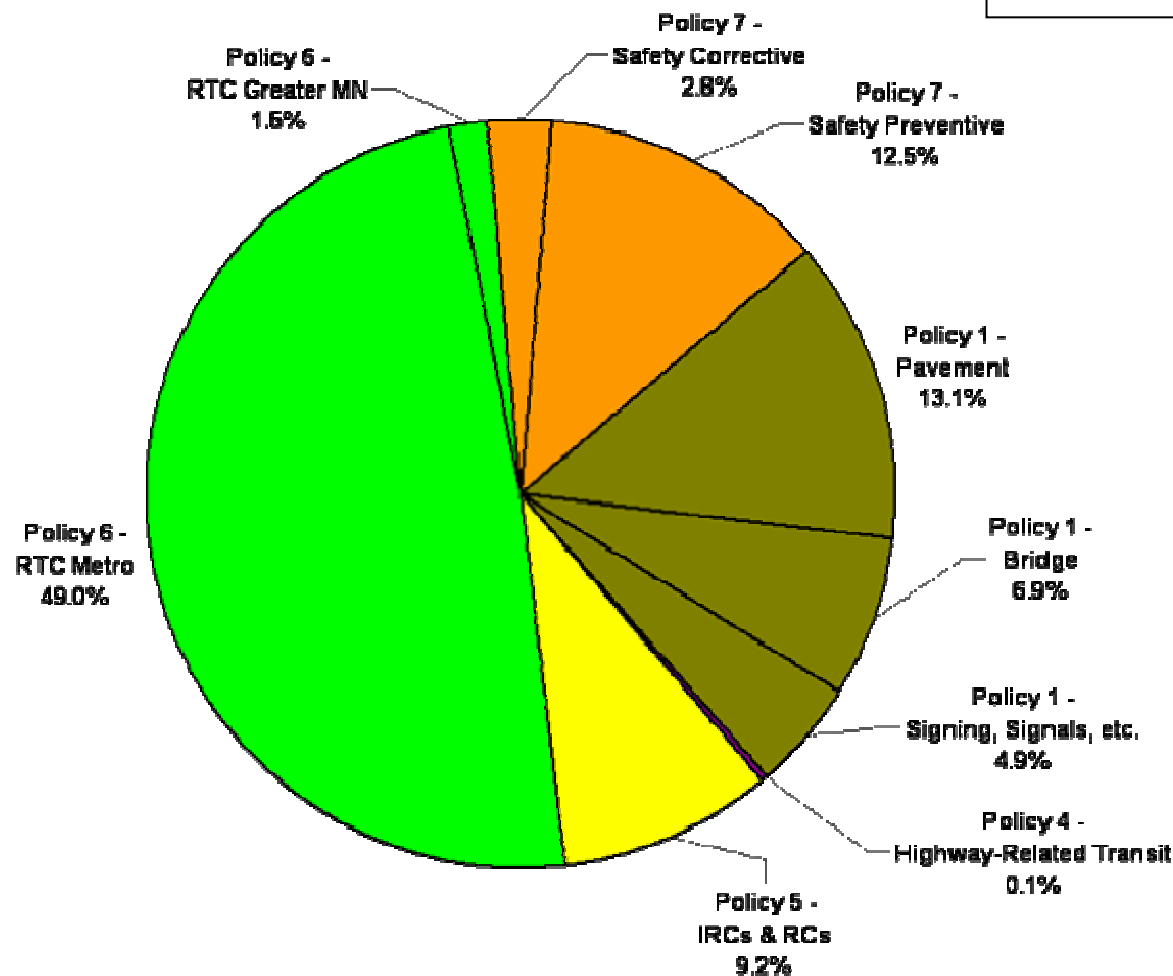
Community Improvement Projects

- 3 to 10% of a District's Forecasted Available Funding may be invested in Community Improvement Project priorities
- Investments not targeted at essential system performance needs but addressing important local concerns



Investments to Meet Performance Targets

2008 to 2030 - \$37.2 billion



Performance Targets

- Infrastructure Preservation (25%)
- Interregional Mobility (9%)
- Trade Center Mobility (51%)
- Safety (15%)



Policy Direction- Available Funding Scenario

- Pavement & Bridge Preservation - Top Priority, Fully Fund
- Priorities among other performance targets, community improvement projects determined by Districts with their stakeholders

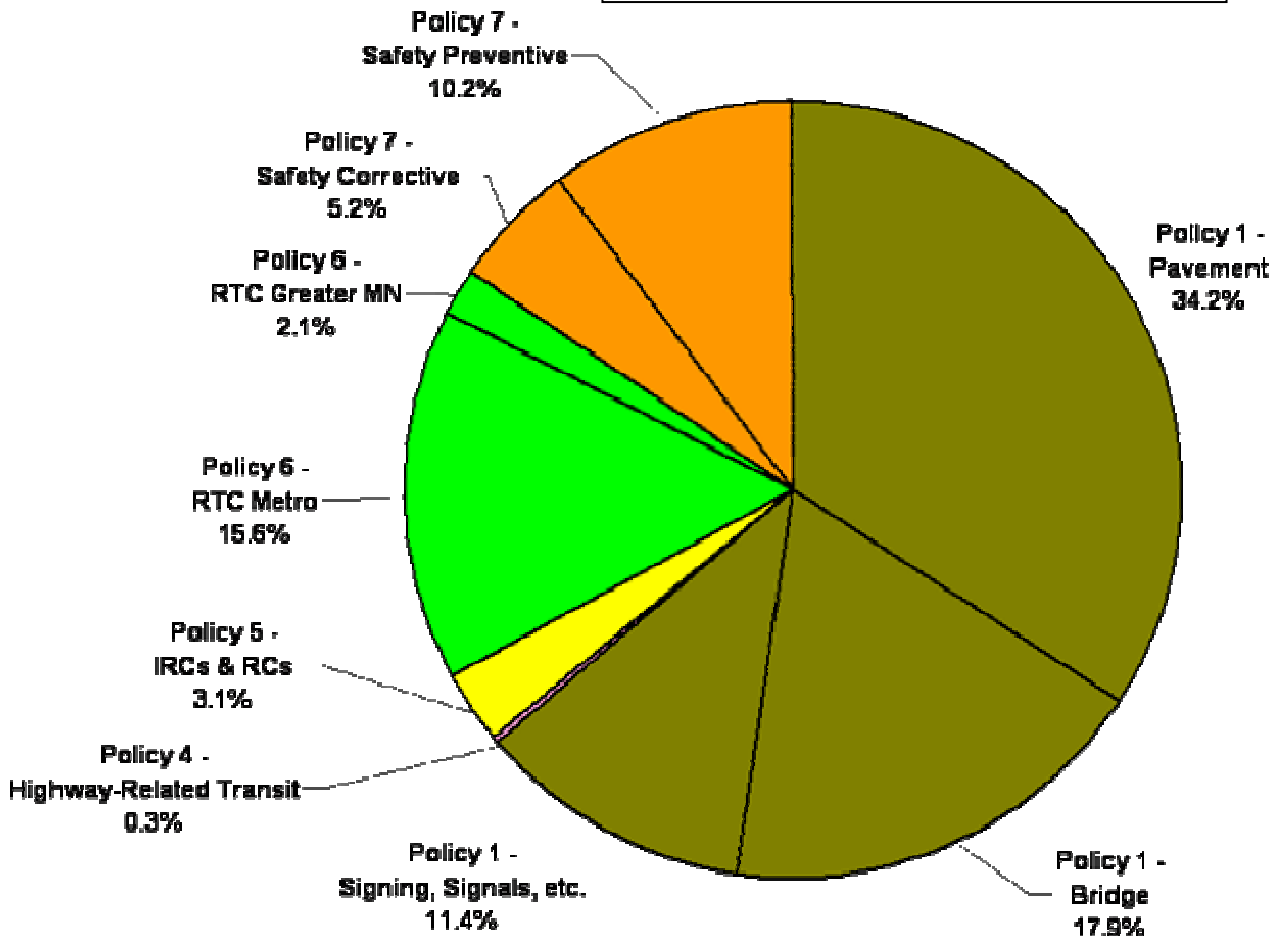


Forecasted Available Funding Priorities

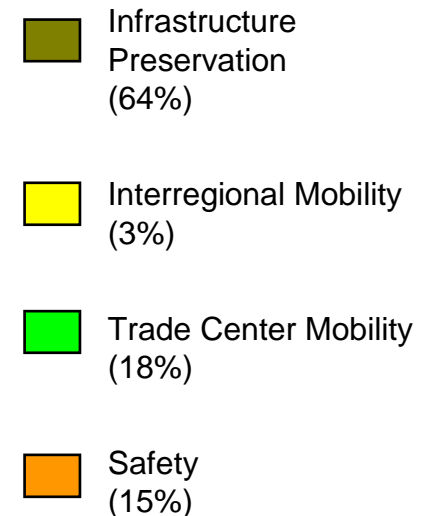
2008 to 2030 - \$14.6 billion

Community Improvement
Project Priorities

\$513 million



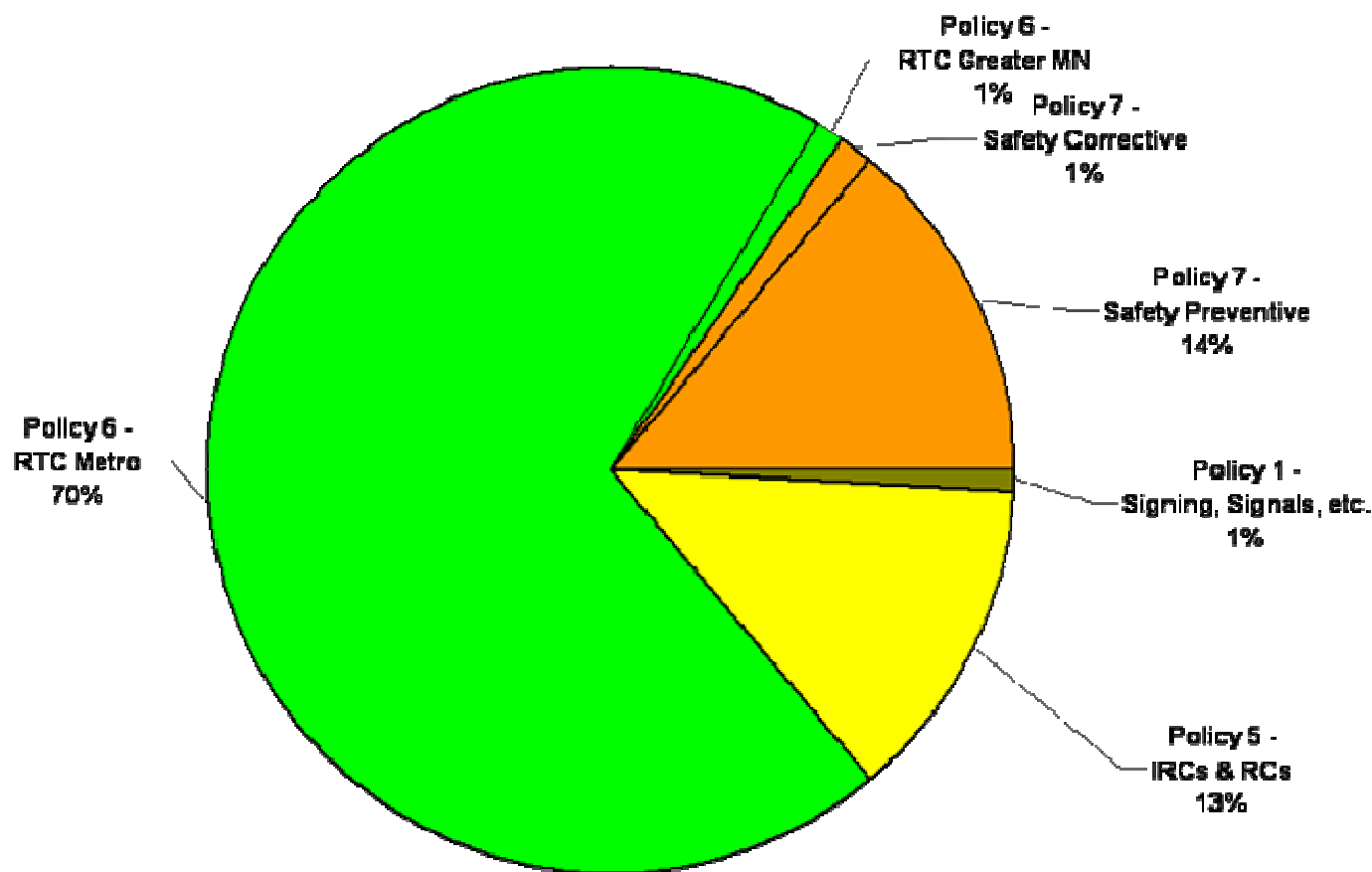
Performance Targets



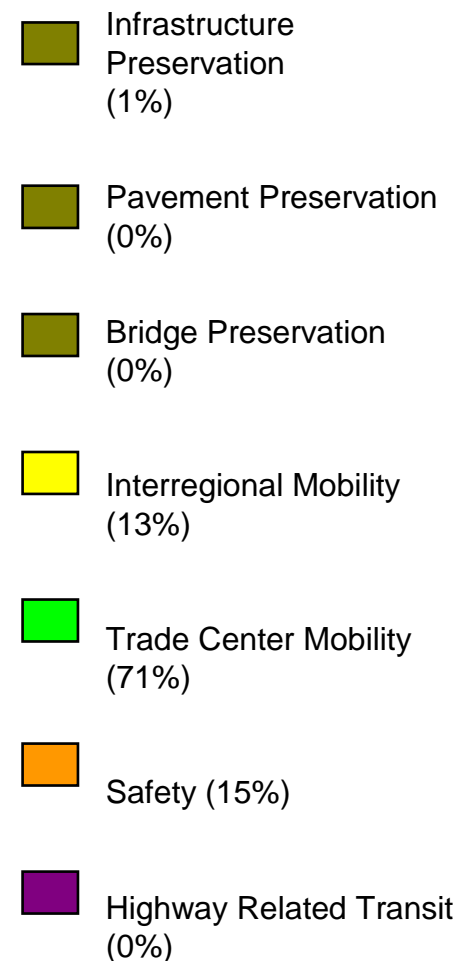


Additional Investments to Meet Performance Targets

2008 to 2030 - \$22.6 billion



Performance Targets





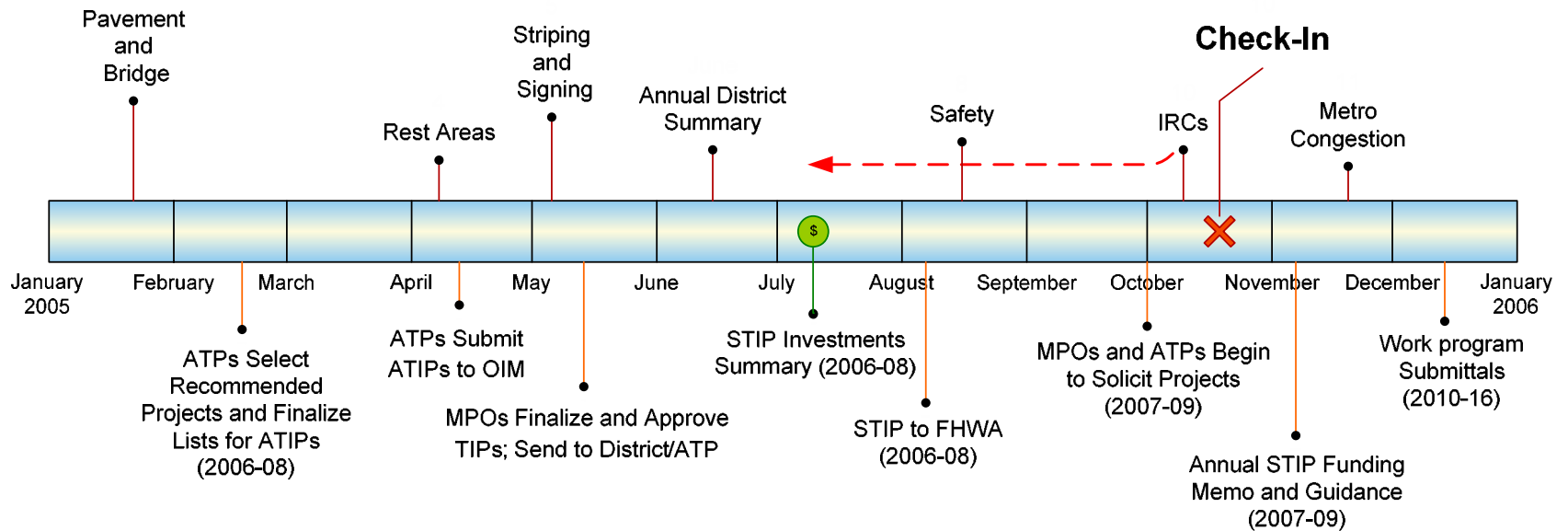
Related Planning & Implementation

- **Highway Systems Operations Plan 2006-09**
 - Maintenance: 4 year Operating Budget Plan
 - Performance targets and investment levels
 - Basis for funding shift from construction to maintenance funds
- **Modal Plans**
 - Freight, Transit, Bikes, Aeronautics
- **Implementation**
 - Linking Plans to STIP
 - Linking Plans to Projects



Plan Implementation Process

- District Operations Performance Measure Reports**



- Key STIP Milestones**



For more information contact:

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